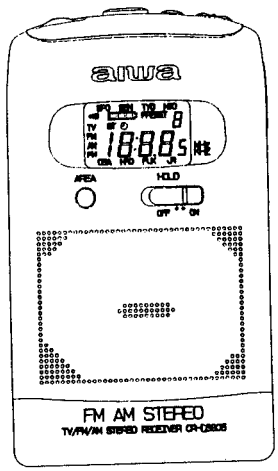
aiwa

CR-DS85



STEREO RADIO RECEIVER

SERVICE MANUAL

• TYPE. Y,YZ

改 定 版
[REVISION PUBLISHING]

S/M Code No. 09 – 941 – 039 – 30K

SPECIFICATIONS

Frequency range
FM: 87.5—108.0 MHz
AM: 9 kHz steps 531—1,602 kHz
10 kHz steps 530—1,600 kHz
Antennas FM: Headphone cord antenna
AM: Built-in ferrite bar antenna
Power output
at 3 V DC operation
Headphone: 6 mW + 6 mW (total 12 mW) (EIAJ/16 Ω)
Speaker: 70 mW (EIAJ/8 Ω)
Output Headphone jack (3.5 ø Stereo mini-type jack 16 Ω)
Power source
DC 3 V, R03 (size AAA) (2)

Battery life
Using two R03 (size AAA) manganese batteries (EIAJ)

	AM	FM
Speaker	Approx. 11 hrs.	Approx. 9 hrs.
Headphone	Approx. 17 hrs.	Approx. 12 hrs.

Speaker 36 mm ø
Dimensions (W/H/D)
59.5 × 102 × 18.9 mm
($2\,^3/_8 \times 4\,^1/_8 \times {}^3/_4$ inches)
Weight Approx. 94 g (3.29 oz) including batteries

Designs and specifications are subject to change without notice.

ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
IC			
	87-017-641-080		IC, LA1816M
	87-017-642-080		IC, CXA1622M
	87-001-145-080		IC, TA8126F
	87-001-151-080		IC, TD6134F1
	87-017-644-010		IC, TC9316F-030
	87-017-643-080		IC, MM1206XF
TRANSISTOR			
	89-342-153-080		C-TR, 2SC42150
	89-508-824-080		C-FET, 2SK882 Y
	87-026-423-080		C-TR, RN2305
	87-026-481-080		C-TR, RN4607
	89-115-884-080		C-TR, 2SA1588Y
	89-342-132-080		C-TR, 2SC4213B
	87-026-414-080		C-TR, RN1307
	89-113-625-080		C-TR, 2SA1362GR
	89-508-804-080		C-FET, 2SK880 Y
	87-026-467-080		C-TR, HN1C01F(GR)
	87-026-425-080		C-TR, RN2307
	87-026-422-080		C-TR, RN2304
	89-341-165-080		C-TR, 2SC4116GR
DIODE			
	87-001-166-080		C-DIODE, 1SS301
	87-001-553-080		C-DIODE 1SS322
	87-001-165-080		C-DIODE, 1SS300
	87-001-764-080		C-DIODE, IMN10
	87-001-167-080		C-DIODE, 1SS302
MAIN C.B			
BPF101	87-030-153-010		FILTER BP154B1
C101	87-012-198-080		C-CAP, U 180P-50 CH
C102	87-012-286-080		C-CAP, U 0.01-25 B
C103	87-012-286-080		C-CAP, U 0.01-25 B
C104	87-012-286-080		C-CAP, U 0.01-25 B
C107	87-010-831-080		C-CAP, U 0.1-16F
C109	87-010-831-080		C-CAP, U 0.1-16F
C110	87-010-805-080		C-CAP, S 1-16 F
C111	87-010-575-080		C-CAP, S 560P-50 UJ
C113	87-012-191-080		C-CAP, U 68P-50 CH
C114	87-012-162-080		C-CAP, U 1P-50 CK
C115	87-012-188-080		C-CAP, U 47P-50 CH
C116	87-012-186-080		C-CAP, U 39P-50 CH
C119	87-012-286-080		C-CAP, U 0.01-25 B
C120	87-012-176-080		C-CAP, U 15P-50 CH
C122	87-012-274-080		C-CAP, U 1000P-50 B
C123	87-010-831-080		C-CAP, U 0.1-16F
C126	87-010-335-080		C-CAP, S 15P-50 UJ
C128	87-010-831-080		C-CAP, U 0.1-16F
C129	87-012-274-080		C-CAP, U 1000P-50 B
C130	87-010-831-080		C-CAP, U 0.1-16F
C131	87-010-831-080		C-CAP, U 0.1-16F
C132	87-012-195-080		C-CAP, U 100P-50 CH
C133	87-010-787-080		C-CAP, U 0.022-25B
C134	87-010-787-080		C-CAP, U 0.022-25B
C135	87-010-831-080		C-CAP, U 0.1-16F
C136	87-010-831-080		C-CAP, U 0.1-16F
C137	87-012-195-080		C-CAP, U 100P-50 CH
C138	87-012-268-080		C-CAP, U 330P-50 B
C139	87-012-286-080		C-CAP, U 0.01-25 B
C140	87-012-286-080		C-CAP, U 0.01-25 B
C141	87-010-831-080		C-CAP, U 0.1-16F
C142	87-010-196-080		C-CAP, S 0.1-25 F
C143	87-012-268-080		C-CAP, U 330P-50 B
C144	87-012-195-080		C-CAP, U 100P-50 CH
C145	87-010-829-080		C-CAP, U 0.047-16F
C146	87-012-195-080		C-CAP, U 100P-50 CH
C147	87-012-349-080		C-CAP, S 1000P-50 CH
C148	87-015-923-080		C-CAP, TN 0.22-35
C149	87-010-274-080		C-CAP, TN 3.3-4
C150	87-010-943-080		C-CAP, E 100-4
C151	87-012-286-080		C-CAP, U 0.01-25 B
C152	87-010-673-080		C-CAP, E 100-2
C153	87-010-746-080		C-CAP, TN 10-4
C154	87-012-337-080		C-CAP, U 56P-50 CH
C155	87-010-831-080		C-CAP, U 0.1-16F
C156	87-012-286-080		C-CAP, U 0.01-25 B
C157	87-012-167-080		C-CAP, U 5P-50 CH
C158	87-012-191-080		C-CAP, U 68P-50 CH
C159	87-012-286-080		C-CAP, U 0.01-25 B

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C160	87-010-829-080		C-CAP, U 0.047-16F
C161	87-012-274-080		C-CAP, U 1000P-50 B
C170	87-012-170-080		C-CAP, U 8P-50 CH
C301	87-010-831-080		C-CAP, U 0.1-16F
C302	87-010-831-080		C-CAP, U 0.1-16F
C303	87-012-286-080		C-CAP, U 0.01-25 B
C305	87-010-746-080		C-CAP, TN 10-4
C306	87-010-274-080		C-CAP, TN 3.3-4
C307	87-010-274-080		C-CAP, TN 3.3-4
C308	87-010-196-080		C-CAP, S 0.1-25 F
C309	87-010-831-080		C-CAP, U 0.1-16F
C310	87-010-746-080		C-CAP, TN 10-4
C311	87-010-196-080		C-CAP, S 0.1-25 F
C312	87-010-588-040		CAP ELECT 220-2
C313	87-010-944-080		C-CAP, E 220-4
C314	87-016-350-040		CAP, E 470-4 MA GAS
C315	87-012-274-080		C-CAP, U 1000P-50 B
C316	87-012-274-080		C-CAP, U 1000P-50 B
C401	87-010-805-080		C-CAP, S 1-16 F
C402	87-012-142-080		C-CAP, S 0.33-16 F
C403	87-012-199-080		C-CAP, U 220P-50 CH
C404	87-012-195-080		C-CAP, U 100P-50 CH
C405	87-012-172-080		C-CAP, U 10P-50 CH
C406	87-012-276-080		C-CAP, U 1500P-50 B
C407	87-010-805-080		C-CAP, S 1-16 F
C501	87-010-787-080		C-CAP, U 0.022-25B
C502	87-010-505-080		C-CAP, TN 1-16
C503	87-012-286-080		C-CAP, U 0.01-25 B
C504	87-012-195-080		C-CAP, U 100P-50 CH
C505	87-010-805-080		C-CAP, S 1-16 F
C506	87-012-286-080		C-CAP, U 0.01-25 B
C507	87-012-286-080		C-CAP, U 0.01-25 B
C508	87-012-195-080		C-CAP, U 100P-50 CH
C509	87-012-286-080		C-CAP, U 0.01-25 B
C510	87-012-184-080		C-CAP, U 33P-50 CH
C511	87-012-168-080		C-CAP, U 6P-50 CH
C512	87-012-286-080		C-CAP, U 0.01-25 B
C513	87-010-831-080		C-CAP, U 0.1-16F
C514	87-010-831-080		C-CAP, U 0.1-16F
C515	87-010-831-080		C-CAP, U 0.1-16F
C516	87-012-286-080		C-CAP, U 0.01-25 B
C517	87-010-831-080		C-CAP, U 0.1-16F
C518	87-010-196-080		C-CAP, S 0.1-25 F
C600	87-010-805-080		C-CAP, S 1-16 F
C601	87-010-805-080		C-CAP, S 1-16 F

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
C602	87-010-785-080		C-CAP, U 0.015-25 B
C603	87-010-785-080		C-CAP, U 0.015-25 B
C604	87-010-785-080		C-CAP, U 0.015-25 B
C605	87-010-785-080		C-CAP, U 0.015-25 B
C606	87-010-942-080		C-CAP, E 47-4
C700	87-012-276-080		C-CAP, U 1500P-50 B
CF102	87-008-428-010		FILT, PFB
CT101	87-011-189-080		C-TRIMMER, CTZ-10A
J1	87-099-369-010		JACK, 3.5BK
L101	83-RCB-607-010		COIL, FM RF(EX)
L103	83-RCB-606-010		COIL, FM OSC(EX)
L105	87-003-247-080		C-COIL, 100UH J
L106	83-RCB-605-010		BAR-ANT, MW(EX)
L107	84-531-606-080		C-COIL, IFT
L301	87-003-231-080		C-COIL, S 1UH
L302	87-003-231-080		C-COIL, S 1UH
L303	87-003-236-080		C-COIL, S 0.47UH
L401	87-006-173-080		C-COIL, DD, 5CDL
LCD1	83-RC1-605-010		LCD
S301	87-036-124-080		C-SW, SLIDE 1-2-2
S302	87-036-123-080		C-SW, SLIDE 1-1-2
S501	87-036-339-080		C-SW, TACT SKQM
S502	87-036-123-080		C-SW, SLIDE 1-1-2
S503	87-036-123-080		C-SW, SLIDE 1-1-2
S508	87-036-339-080		C-SW, TACT SKQM
S510	87-036-339-080		C-SW, TACT SKQM
S511	87-036-339-080		C-SW, TACT SKQM
S512	87-036-339-080		C-SW, TACT SKQM
SFR101	87-024-595-080		C-SFR, 10K TMC 3K
VC101	87-026-360-080		C-VARI CAP, KV1430
VC102	87-026-360-080		C-VARI CAP, KV1430
VC103	87-017-645-080		C-VARICAP, KV1580
VR201	87-024-634-010		VR, 50KB XV0102G
XT501	87-030-219-010		V1B, XTAL 75K

SW1 C.B

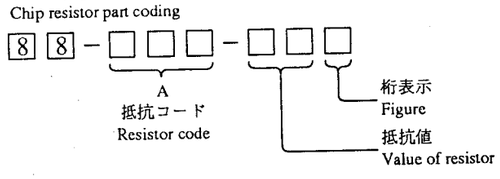
S505	87-036-170-080		SW, TACT
S506	87-036-170-080		SW, TACT
S507	87-036-170-080		SW, TACT

SW2 C.B

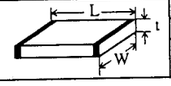
S504	87-036-170-080		SW, TACT
S509	87-036-170-080		SW, TACT

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

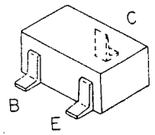
チップ抵抗部品コードの成り立ち
Chip resistor part coding



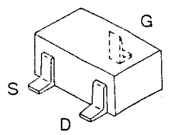
チップ抵抗
Chip resistor

Wattage 容量	Type 種類	Tolerance 許容誤差	Symbol 記号	Dimensions／寸法 (mm) Form/外形	L	W	t	Resistor code : A 抵抗コード : A
1/32W	1608	±5%	CJ		1.6	0.8	0.35	108
1/10W	2125	±5%	CJ		2	1.25	1.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.5 ~0.7	128

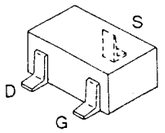
TRANSISTOR ILLUSTRATION



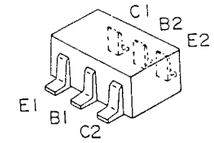
2SA1362
2SA1588
2SC4116
2SC4213
2SC4215
RN1307
RN2304
RN2305
RN2307



2SK880

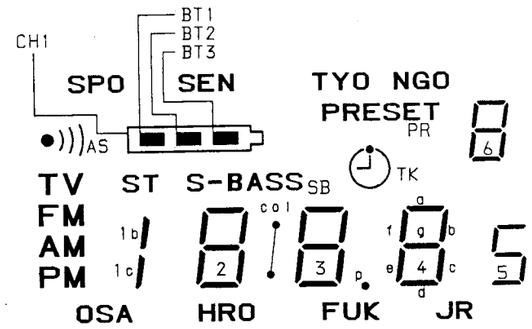


2SK882



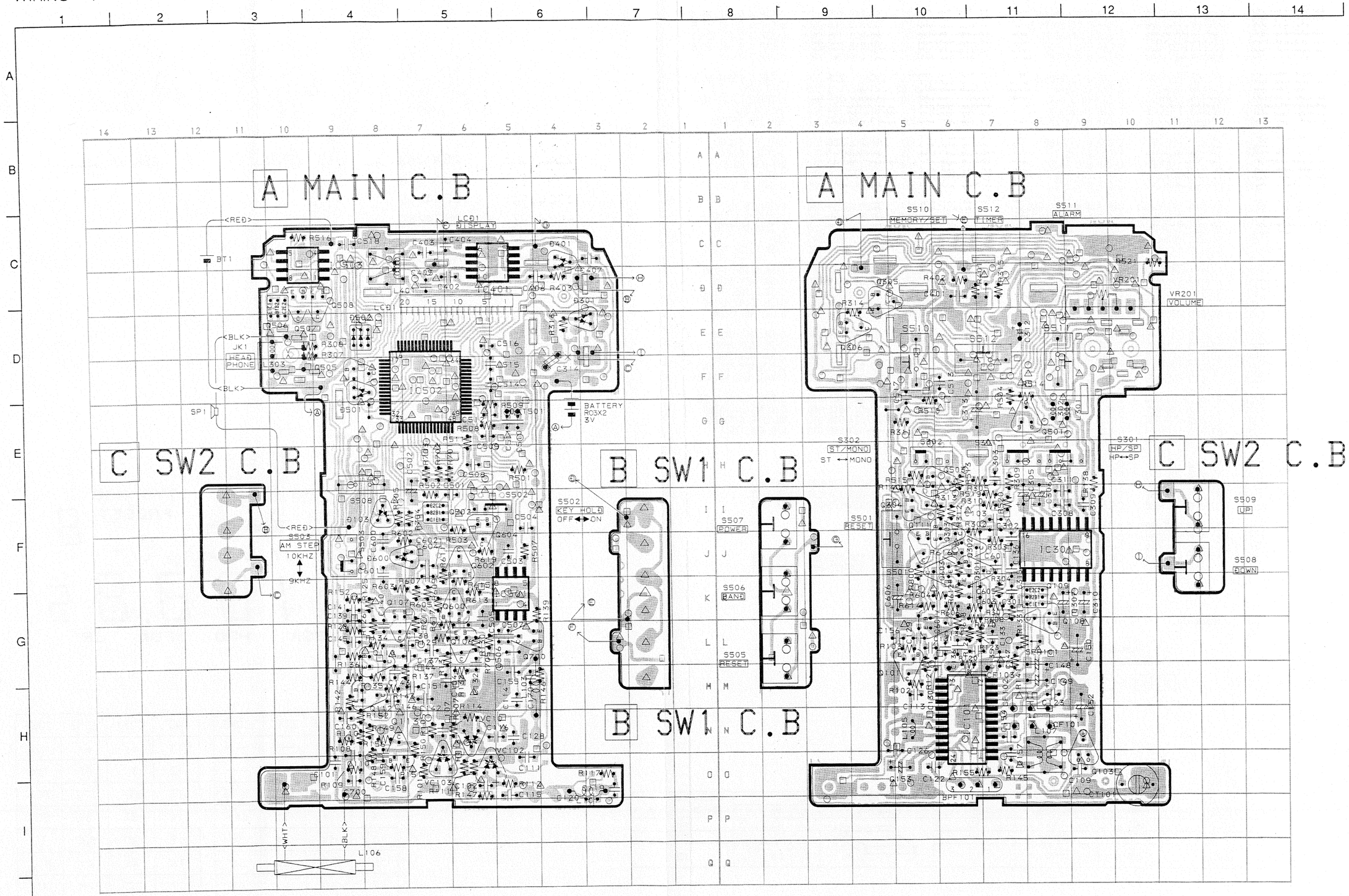
RN4607
HN1C01

LCD

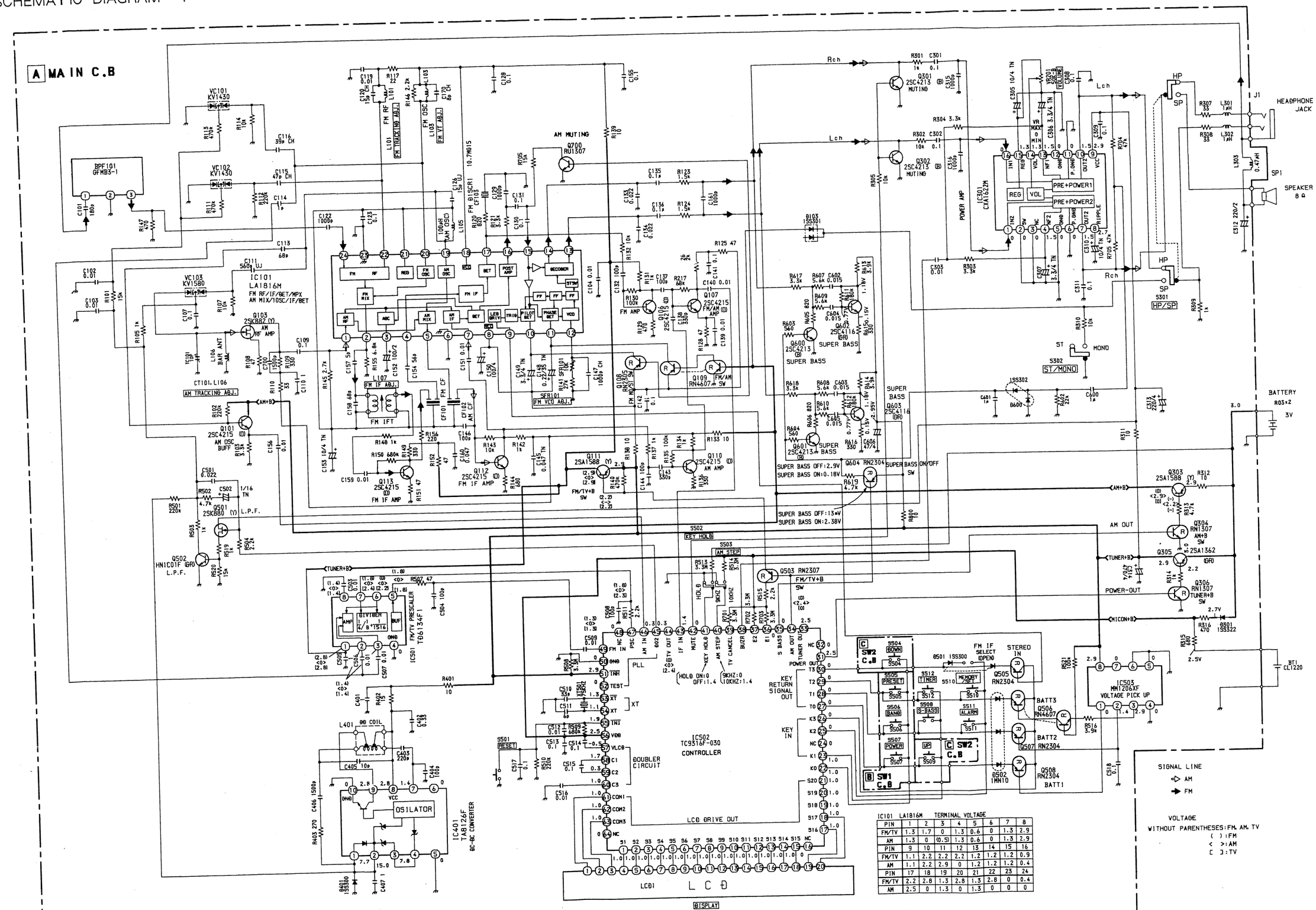


NO	COM1	COM2	COM3
1	COM1	——	——
2	——	COM2	——
3	——	——	COM3
4	3e	3f	col
5	3d	3g	3a
6	FUK	3c	3b
7	4d	4g	4a
8	JR	4c	4b
9	5	6c	6b
10	6d	6g	6a

NO	COM1	COM2	COM3
11	6e	6f	NGO
12	TK	PR	TYO
13	BT1	BT2	BT3
14	ST	SB	SEN
15	AS	SPO	TV
16	4e	4f	FM p
17	OSA	PM	AM
18	2e	2f	1b.c
19	2d	2g	2a
20	HRO	2c	2b


A MAIN C.B
<RED>
BT1
LCD1 DISPLAY
<BLK>
JK1
HEAD PHONE
<BLK>
SP1
BATTERY RO3X2 3V
IC502
C SW2 C.B
S503
AM STEP
10KHZ
9KHZ
<RED>
<WHT>
<BLK>
L106
B SW1 C.B
S502
KEY HOLD
OFF ↔ ON
S507
POWER
S506
BAND
S505
RESET
A MAIN C.B
S510
MEMORY/SET
S512
TIMER
S511
ALARM
VR201
VOLUME
S302
ST/MONO
ST ↔ MONO
S501
RESET
G301
HP/SP
HP↔SP
C SW2 C.B
S509
UP
S508
DOWN
B SW1 C.B

SCHEMATIC DIAGRAM – 1



IC101 LA1816M TERMINAL VOLTAGE

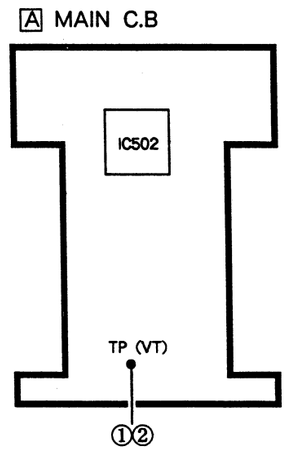
PIN	1	2	3	4	5	6	7	8
FM/TV	1.3	1.7	0	1.3	0.6	0	1.3	2.9
AM	1.3	0	(0.5)	1.3	0.6	0	1.3	2.9
PIN	9	10	11	12	13	14	15	16
FM/TV	1.1	2.2	2.2	2.2	1.2	1.2	1.2	0.9
AM	1.1	2.2	2.9	0	1.2	1.2	1.2	0.4
PIN	17	18	19	20	21	22	23	24
FM/TV	2.2	2.8	1.3	2.8	1.3	2.8	0	0.4
AM	2.5	0	1.3	0	1.3	0	0	0

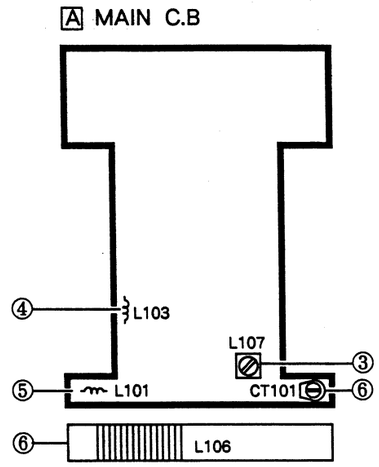
IC DESCRIPTION

IC, TC9316F-030

Pin No.	Pin Name	I/O	Description
1~15	S1~S15	O	LCD segment output.
16	NC	–	Not used.
17~18	S16~S17	O	LCD segment output.
19~21	S18~S20	–	Not used.
22~23	K0~K1	I	Key input.
24	NC	–	Not used.
25~26	K2~K3	I	Key input.
27~30	T0~T3	O	Key return output.
31	POWER OUT	O	"H" when RADIO mode or ALARM is on or TIMER is on.
32	NC	–	Not used.
33	TUNER OUT	O	"H" when RADIO mode.
34	AM OUT	O	"H" when AM band is selected in RADIO mode.
35	S BASS	O	SUPER BASS output. "H" when SUPER BASS is on.
36	E1	I	Selection for Japan or abroad. (E1)
37	E2	I	Selection for Japan or abroad. (E2)
38	BUZR	O	Buzzer output.
39	TV CANCEL	I	TV mode is canceled in Japan, when "H".
40	AM STEP	I	AM STEP selection. 10kHz step when "H".
41	KEY HOLD	I	KEY HOLD input. Key is not available when "L".
42	MUTE	O	MUTE output. "H" when muting.
43	IF IN	I	IF counter input.
44	TV OUT	O	Not used.
45	DO2	O	Phase comparator output.
46	AM IN	I	AM oscillation input.
47	PSC	O	Prescaler control.
48	NC	–	Not used.
49	FM IN	I	FM oscillation input.
50	$\overline{GND}$	–	GND
51	INH	I	CLOCK/RADIO selection.
52	$\overline{TEST}$	–	Not used.
53	XT	–	X'tal oscillation terminal.
54	$\overline{XT}$	–	X'tal oscillation terminal.
55	INI	I	Initialize input.
56	VDD	–	Power supply.
57	VLCD	–	Power supply for LCD booster.
58~60	C1~C3	–	LCD capacitor terminal.
61~63	COM1~COM3	O	LCD common output.
64	NC	–	Not used.

ADJUSTMENT





TUNER SECTION

1. AM (MW) VT Check
   Settings : • Test point : TP (VT)
   Method : Set to AM (MW) 531kHz and check so that the test point becomes 1.0V ± 0.2V.
   Set to AM (MW) 1602kHz and check so that the test point becomes 7V less than.

2. FM VT Check
   Settings : • Test point : TP (VT)
   Method : Set to FM 875MHz and check so that the test point becomes 1.0V ± 0.1V.
   Set to FM 108MHz and check so that the test point becomes 8.5V less than.

3. FM IF Adjustment
   L107 ····· 10.7MHz

4. AM (MW) Tracking Adjustment
   L106 ····· 630kHz
   TC101 ····· 1440kHz

5. FM Tracking Adjustment
   L101 ····· 108MHz

PRACTICAL SERVICE FIGURE

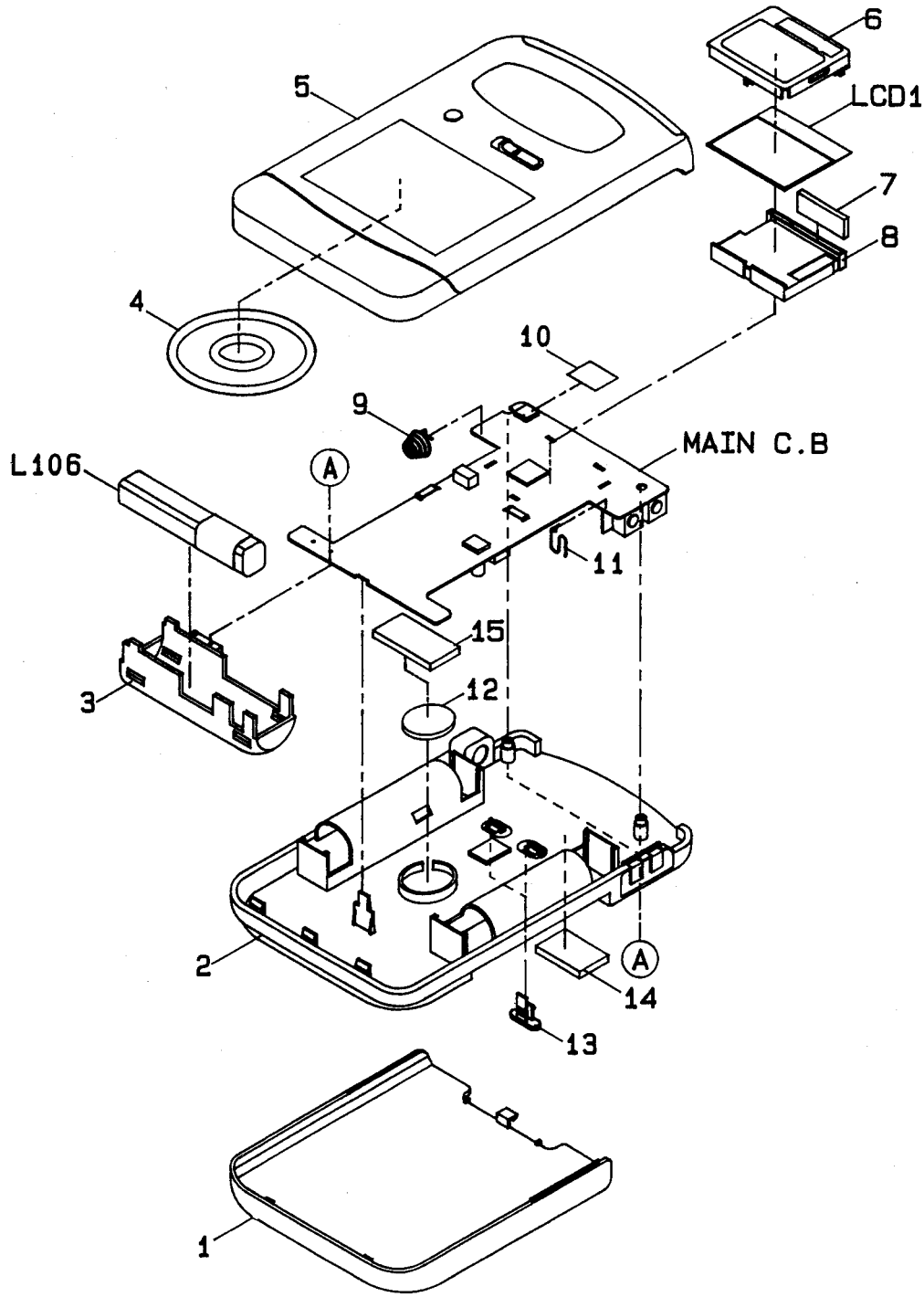
< FM SECTION >

IHF Sensitivity :	13dB ± 5dB (87.5MHz)
(THD 3%)	13dB ± 5dB (98.0MHz)
	14dB ± 5dB (108.0MHz)
Distortion (Input54dB) :	Less than 3.0% (98.0MHz)
(Input120dB) :	Less than 3.0% (98.0MHz)
Stereo separation :	22dB ± 4dB (98.0MHz)
Intermediate frequency :	10.7MHz

< AM SECTION >

Sensitivity :	Less than 51dB (630kHz)
(S/N 20dB)	Less than 50dB (999kHz)
	Less than 50dB (1404kHz)
Distortion (Input74dB) :	Less than 4.0% (999kHz)
(Input120dB) :	Less than 8.0% (999kHz)
Intermediate frequency :	450kHz

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	カンリ NO.	DESCRIPTION
1	83-RC1-011-010		LID, BATT
2	09-037-068-010		CAB, REAR ASSY
3	83-RC1-212-010		HOLDER, BAR ANT
4	81-HJ4-602-010		SP
5	09-037-067-010		CAB, FRONT ASSY
6	83-RC1-205-010		BRKT, LCD
7	83-RC1-201-010		CONT, RUBBER LCD
8	83-RC1-209-010		HOLDER, LCD
9	83-RC1-204-010		CONT, BATT(C)
10	89-HK2-223-010		SHEET, M
11	83-RC1-203-010		CONT, BATT(B)
12	84-462-614-010		CL BATT
13	83-RC1-005-010		KNOB, SL SP/HP
14	83-RCB-003-010		LBL, SPEC
15	83-RC1-215-010		SH, H 25-15
A	87-067-405-010		VT1.4-6HL

■ ACCESSORIES／PACKAGE LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	ｶﾝﾘ NO.	DESCRIPTION
1	83-RCB-901-010		IB, EX-EGFSIC-J
2	83-RC1-951-010		CARRYING CASE
3	87-048-236-010		HP-22A

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER
ｻｰｼﾞｻﾌﾟﾚｯｻ	SERGESUPPRESSOR
ｾﾗｺﾝ	CAP, CERA

サービス技術ニュース	
番号	連絡内容
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G－　－	
G－　－	

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BAT, CONTACT ASSY	BATTERY CONTACT ASSY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
KNOB, VOL REV	KNOB, VOLUME REV
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTORL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOADING MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
SW	SWITCH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL
ｼｸｱｰﾑ	ARM, SHAFT
ｼｸｶﾞｲﾄﾞ	GUIDE, SHAFT
ｽﾄﾗｯﾌﾟ	STRAP
ﾋﾝｼﾞ	HINGE

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